

Study Topic 1/1 (S112)

EVALUATION OF THE DEPOSITS OF NON-FERROUS METALS AND RARE METALS IN  
THE SOVIET OCCUPATION ZONE OF GERMANY, WITH ESTIMATES OF THE RESERVES  
OF ALL CATEGORIES

The non-ferrous mining centers of the Soviet Zone are the Erzgebirge in Saxony and the Central German copper shale region in the vicinity of Eisleben. There are only very few other deposits of non-ferrous metals in this zone being mined at present.

The introductory chapter presents a summary of the economic importance of the non-ferrous metal mines of the Soviet Zone, and of their share in the total German non-ferrous metal production.

The main part of the study is devoted to the deposits of the Erzgebirge in Saxony (Vols. 1-5). This mountain range was once famous for its rich silver, lead, zinc, tungsten, nickel, and bismuth deposits, but today it is mostly exhausted. This is particularly true of the formerly very important silver-lead ore mines of the Freiberg region. Its two last mines, Beihilfe, near Halsbruecke, and Himmelfahrt, directly outside the city of Freiberg, were reopened due to the shortage of metals just before or during World War II, although with constantly increasing expense and decreasing yield. Volume 1 contains a detailed description of these two mines.

Volumes 2-4 treat the tin and tungsten deposits of the Erzgebirge. The mines still in operation at the end of the war were the tin mines of Altenberg, Ehrenfriedersdorf, and Tannenberg, the tin-tungsten mines of Sadisdorf, Zinnwald, and Tannenberg, and the tungsten mines of Schemmlau and Pechtelgruen, a total of eight mines. The characteristics of these mines are: low depth development, thus moderate to small reserves of ore, and low metal contents. The only exceptions are Tannenberg and Zinnwald, where the metal contents are satisfactory, although the greatest part of the Zinnwald mine, which is important on account of its tungsten content, lies in Czechoslovak territory. Altenberg has a special position because it allows the inexpensive

mining of loose rocks; the problem here is mainly that of ore dressing.

The cobalt-nickel-bismuth deposits of Schneeberg and Johanngeorgenstadt, which are also of interest for their sporadic content of uranium, are discussed in Volume 5. Their economic importance today is slight, and is limited to the moderate mining of bismuth. Centuries ago they were of prime importance in supplying the world market with cobalt, and at the time of the opening of these mines they yielded great amounts of silver.

The study of the Central German copper shale is being carried out by the Mansfeld A.G. of Eisleben. The subject of the study is the central region of Mansfeld itself, where there is important copper and silver mining, and the small Sangerhausen region, southwest of Eisleben. This latter region is being developed at the present time, and will lengthen the life span of the Mansfeld region which is slowly being exhausted.

The last volume of the monograph discusses the other non-ferrous deposits. Only the pyrite deposit of the "Drei Kronen und Eht" mine near Elbingerode in the Harz Mountains, important for the pyrite supply of the Soviet Zone, and the antimony deposits of the "Halber Mond" mine at Oberboesheim near Schleis, Thuringia, are being mined at the present time. The latter is the only mine in Germany producing antimony; however, it is of only slight economic importance.

This project is an amplification of and supplement to Study Project 2/2 (3111) along economic and mining-engineering lines for the deposits in the Soviet Zone. The discussion of the mineralogical and geological conditions is not stressed here; emphasis is placed rather on the discussion of the conditions of production and operations, the technical equipment, costs of operation, ore reserves, and the economic potential of the individual mines. As far as data could be obtained, the estimate of the ore reserves is classified as to "visible", "probable", and "possible ores". (NOTE: Words in quotes are in English in the original.)

Nearly all the non-ferrous mines of the Russian Zone operate at high or very high overheads. This applies especially to the ore mines in Saxony, where the costs of operation are five to ten times the profit derived from the ore, or even higher. This is due mainly to the low contents and the extremely high capital investments. For that reason, the mines could be operated only with sizable government subsidies. It is thus not expected that these mines will ever be able to break even, much less operate at a profit, when metal prices are at their normal level.

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